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ABSTRACT

The purpose of this research was to investigate whether an attempt to modify migrant parents' behavior in accordance with social psychological principles results in better academic achievement by their children. Specific aspects investigated were (1) Can the images and expectations which migrant parents hold for their low-achieving children be positively modified? (2) Will systematically increased images and expectations as perceived by migrant children result in enhanced self-concepts of ability? and (3) Will enhanced self-concepts of ability result in significant increases in academic achievement? A sample of 21 children of Puerto Rican descent, 12 in the experimental group (aged 6 to 16) and 9 in the control group (aged 7 to 14), was utilized in a pre-post design. Data collected through the administration of the reading and arithmetic subtests of the "Metropolitan Achievement Test" and a Spanish translation of the "Michigan State General Self-Concept of Ability Scale" were analyzed by a 1-tailed t-test for related measures. The results indicated that the self-concept of ability for the experimental group increased significantly and that academic achievement of the experimental group, as measured by the instruments described, increased significantly. (Author/MB)

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IMPROVING MIGRANT STUDENTS' ACADEMIC ACHIEVEMENT THROUGH SELF-CONCEPT ENHANCEMENT

by

James F. Mangano
Richard C. Towne

[1970]

NEW YORK STATE CENTER FOR MIGRANT STUDIES

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THE NEW YORK STATE CENTER FOR MIGRANT STUDIES

The New York State Center for Migrant Studies is an independent organization devoted to professional research in the areas of education, employment, community relations and other aspects of the conditions of migrant labor in the State of New York.

The principal purposes are to initiate studies relevant to understanding and improving the conditions of the migrant, and to publish and disseminate these studies. The New York State Center for Migrant Studies, co-sponsored by the New York State Education Department's Bureau of Migrant Education, John Dunn, Chief, and the State University College of Arts and Science at Geneseo, New York, Robert W. MacVittie, President, was founded in February 1968.

The study has been recommended for publication by the Publications Committee of the Executive Council of the Center as an important contribution to the understanding of the migrant problem. It has been approved by the Executive Council of the Advisory Board of the Center except as specifically indicated and supercedes all previous drafts released for private circulation prior to publication. However, the interpretations and conclusions of the study are those of the author and do not necessarily represent the official position of the Center.

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ABSTRACT

The purpose of this research was to investigate the general question - will an attempt to modify migrant parents' behavior in accordance with social psychological principles result in better academic achievement by their children? Those aspects that were specifically investigated were:

1. Can the images and expectations which migrant parents hold for their low achieving children be positively modified?

2. Will systematically increased images and expectations as perceived by migrant children result in enhanced self-concepts of ability?

3. Will enhanced self-concepts of ability result in significant increases in academic achievement?

From these considerations, the investigators generated two hypotheses. The first...systematically developed increases in perceived images and expectations which migrant parents (as significant others) hold of their low achieving children will result in significant increases in these students' self-concept of ability. The second...systematically developed increases in migrant students' self-concept of ability will result in significant increases in school achievement.

A total sample of twenty-one children of Puerto Rican descent, twelve members in the experimental group and nine in the control group, were utilized in a pre-post design. Data collected through the administration of the reading and arithmetic subtests of the Metropolitan Achievement Test and a Spanish translation of the Michigan State General Self-Concept of Ability Scale were analyzed by a one-tailed t-test for related measures.

The results indicated that the self-concept of ability (SCA) for the experimental group increased significantly. It was further found that the academic achievement of the experimental group, as measured by the instruments described, increased significantly.

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CHAPTER I

THE PROBLEM

Introduction

Because schools now act as our culture's primary sorting mechanism, it becomes daily more important to be successful in school if you are to be more than a marginal person in the present world. This has long been recognized by those whose goal is to improve the migrants' way of life. Thus, through their accompanying efforts to better immediate conditions of migrant health, diet, and economic insufficiency, they have initiated equally extensive programs whose goals are to effect long range improvements by enhancing the educational achievement of migrant children. Toward this end programs all over the country have sought to effect two outcomes:

1. to increase parental involvement in school related behaviors, and

2. to enhance the migrant child's self-concept[1]

In New York State for several years, the Migrant of the New York State Education Department has had as one of its goals the improvement of the migrant child's self-concept.[2] Emphasizing the importance of this objective, Mattera wrote:

> ...The image he forms of himself is the primary factor in determining whether he will become a failure or success as a human being.
>
> Each person functions as a person only in terms of how he sees himself...[3]

When applied to school performance, this means that a migrant child can be expected to function at school in terms of how he sees himself as a student: poorly if his view of self as a student is poor and at higher levels if his self-image is more positive. And programs whose goal it is to enhance the academic performance of migrant children can ill afford to ignore this factor or to leave it to chance or to teachers providing occasional success experiences, pats on the head, and smiles of encouragement. Systematic theoretically founded programs to enhance the migrant child's view of self as a student must be devised, tested and then used. It can be done.

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[1]See, for example, Planning Florida's Migrant Education Program, Report of the Workshop, (Chinsegert Hill, July 18-27, 1966). Eleanor Thones, A Program for Children Who Follow the Crops, (Marysville, California: Sutter-Yuba Education Committee, 1966). A Guide for Programs for the Education of Migrant Children, (Austin, Texas: Texas Education Agency, 1968).

[2]Walter Crewson, These Too Are Our Children, (Albany, New York: Migrant Bureau, State Department of Education, 1967), p.3. Gloria Mattera, et. al., Educating Migrant Children, (Albany, New York: N.Y.S. Education Department, 1968), p.16.

[3]Ibid, p. 40.

Problem Statement

The research reported herein concerns itself with improving the migrant child's academic achievement by investigating the general research problem:

> Will an attempt to modify migrant parents' behavior in accord with social psychological principles result in better academic achievement by their children?

Within the general problem, the particular research problems investigated are:

1. Can the images and expectations which migrant parents hold for their low achieving children be positively modified?

2. Will systematically increased images and expectations as perceived by migrant children result in enhanced self-concepts of ability?

3. Will enhanced self-concepts of ability result in significant increases in academic achievements?

CHAPTER II

OBJECTIVES

General Purpose

This project's purpose is to enhance migrant students' academic achievement by extending the limits on academic ability set by their self-concept of ability (SCA). This report presents the results of a six week experiment designed to accomplish this end. It includes an analysis of two hypotheses and an exposition of the treatment utilized. In addition, supplementary data are appended.

Hypotheses

For clarity, the following hypotheses are stated in both literary and operational form. In the literary form, they are stated as research hypotheses, not as null hypotheses.

Hypothesis 1: Systematically developed increases in perceived images and expectations which migrant parents (as significant others) hold of their low achieving children will result in significant increases in these students' self-concept of ability (SCA).

H_r: $SCA_2 > SCA_1$

H_0: $SCA_2 \leq SCA_1$

where SCA_1 = pre experiment self-concept of ability
SCA_2 = post experiment self-concept of ability

Hypothesis 2: Systematically developed increases in migrant students' self-concept of ability will result in significant increases in school achievement.

H_r: $AA_2 > AA_1$

H_0: $AA_2 \leq AA_1$

where AA_1 = pre experiment academic achievement
AA_2 = post experiment academic achievement

Definitions

Self-concept of ability (SCA): In this research self-concept of ability is the "...evaluating definitions which an individual holds of himself in respect to his ability to achieve in academic tasks in general as compared with others

in his school class."[1] Operationally it is defined as an obtained score on a Spanish translation of the Michigan State General Self-Concept of Ability Scale. (See Appendix A).

Academic Achievement: In this research "academic achievement" refers to the level of accomplishment attained in the skill and content areas traditionally taught in the academic curriculum of the public schools: reading, writing, spelling, arithmetic, science, social studies and language arts. Operationally it is defined as the obtained standard scores on the reading and arithmetic subtests of the Metropolitan Achievement Test Form A.

Rationale for Hypotheses

Theoretical: The two previously stated hypotheses are based upon the work of Wilbur Brookover and his associates. The theoretical basis for the hypotheses rests in their social psychological approach to school learning which in its briefest form:

> ...postulates that human behavior is a function of the expectations and evaluations of others who are significant to the actor as perceived by him and as internalized in a self-conception of what is appropriate and proper for him to do and what he is able to do.[2]

As the general postulate is applied to the school learning of children it is asserted:

> ...that a student's self-concept of academic ability results from his perceptions of the evaluations significant others hold of his ability. The student's self-concept of academic ability in turn functions to limit the level of academic achievement attempted. Self-concept of academic ability is therefore hypothesized as an intervening variable between the expectations and evaluations of significant others and school achievement. The relationship of perceived evaluations of significant others is conceptualized as a necessary and sufficient condition, i.e., a change in the perceived evaluation of others will be reflected in a change of self-concept. The relationship of self-concept of academic ability to academic achievement, on the other hand, is hypothesized as a necessary but not a sufficient condition for the occurrence of a particular level of academic performance.[3]

Empirical: The empirical antecedent and model upon which this research rests is an experiment designed by Brookover and his associates to investigate the effects of enhancing the academic expectations and evaluations which a group of parents held for their underachieving seventh grade children. It was found:

---

[1]Wilbur Brookover, Edsel Erickson, and Lee Joiner, Self-Concept of Ability and School Achievement III, Final Report of Cooperative Research Project No. 2831, U.S. Office of Education (East Lansing, Human Learning Research Institute, Michigan State University, 1967), p. 59.

[2]Ibid., p. 139.

[3]Ibid., p. 40.

> ...the sons and daughters of experimental group parents had (1) altered their perception of selves as achievers in a significantly positive direction; and (2) significantly improved their academic performance in school as reflected in academic grades given by teachers (6/62-6/63). By contrast...there was no significant change in self-concept of ability for students in the placebo or control groups during the same period...[1]

Based on these findings, it was concluded:

> ...the self-concept of ability of low achieving students can be enhanced by working with parents and that this improvement in self-concept will be reflected in improved academic performance.[2]

---

[1]Wilbur Brookover, et. al., Improving Academic Achievement Through Students' Self-Concept Enhancement, Final Report of Cooperative Research Project No. 1636, U.S. Office of Education (East Lansing: Bureau of Educational Research Services, College of Education, Michigan State University, 1965), p. 88.

[2]Ibid., p. 204.

CHAPTER III

RELATED RESEARCH

The Migrant Student's Self-Concept

While self studies have been performed by the thousands, very few have involved migrant students as a target population. For example, in Gellman's recent review of the literature it was concluded "...the migrant child is particularly vulnerable to negative concepts..."[1] but she cites no hard data derived from actual study of the migrant's self-concept. Instead she arrives at the conclusion from a review of (1) migration and (2) self-concept in general.

In her study, however, Gellman generates data regarding the migrant child's self-concept, particularly as it is related to academic achievement. Using a self-concept scale she adapted from the Bill's Index of Adjustment and Values, Gellman used correlation techniques to study the relation between the scores obtained on the self scale and scores obtained on achievement tests in arithmetic and language. Her subjects, who lived in New Mexico, were male and female sixth graders having Spanish surnames.

For the sixth graders, male or female, she found no significant relationship between self-concept scores and measures of academic achievement.[2] In the fourth grade, the only significant relationship between the self measure and academic achievement occurred between the self-concept scores and arithmetic scores for females.[3] For no other group was there a significant relationship between self scores and measures of academic achievement.[4] In spite of these findings, Gellman recommended "...positive self-concept development...should be an essential element of the curriculum for all children."[5]

While Gellman's findings argue against the possible benefits of the research reported herein, it is important to emphasize that the source of her adapted scale, the Bill's Index of Adjustment and Values is based on a global view of self, not the particular view used in this research. As a global measure it is not surprising that the measured relationships were not significant.[6]

---

[1]Geneva B. Gellman, The Relationship Between Self-Concept, Intellectual Ability, Achievement and Manifest Anxiety Among Select Groups of Spanish Surname Migrant Students in New Mexico, June 1969, p. 61.

[2]Ibid., p. 119.

[3]Ibid.

[4]Ibid.

[5]Ibid., p. 122.

[6]See Ruth Wylie, "Children's Estimates of Their School-Work Ability as a Function of Sex, Race, and Socio Economic Level", Journal of Personality, XXXI (1963), 203-224, and Brookover, Erickson and Joiner, op. cit., pp. 21-24.

Some of the hardest data concerning the migrant's self-concept is contained in two studies by Palomares and Cummins who used the California Test of Personality to investigate the self-concept of rural Mexican-American children ranging from preschoolers through grade six and from preschoolers through grade twelve. In their first report findings indicated:

> The Mexican-American population in the San Ysidro school tends to see itself in a less favorable way than the normative population. Its self-concept seems permeated with feelings of inadequacy and low self esteem both in home and school environment.[1]

In contrast to low self ratings, Palomares and Cummins found their subjects ranked "fairly high" on a social maturity scale which they found puzzling and attempted to explain by speculating "...the self-concept of the Mexican-American in his own culture is much more positive".[2] While no data supports their reasoning, it is important to note that Palomares and Cummins' argument is consistent with the theoretical base of this study which views self statements as a result of comparisons with others, subject to change as comparisons change.

In another research effort undertaken in a different locale with a broader age span of Mexican-American pupils, preschool through twelfth grade, Palomares and Cummins arrived at a conclusion identical to that quoted above regarding measured self-concept.[3] Similar findings were obtained regarding social maturity and the same argument was proposed to explain the supposed discrepancy.[4]

Support for Palomares and Cummins' belief that migrants experience more adequate self perceptions within their own subculture is found in a report from Florida.[5] Although no data is reported, a self-concept scale described as "...an attempt to have the examinee project his intellectual, academic and projected potential in relation to the other students in his classroom"[6] was administered and it was concluded:

> Migrant children consistently project an adequate sense of "personal worth" within their own subculture; however, when

---

[1]Uvaldo Palomares and Emery Cummins, Assessment of Rural Mexican-American Pupils, Preschool and Grades One Through Six, San Ysidro, California, (Sacramento, California: California State Department of Education, 1968), p. 27.

[2]Ibid.

[3]Uvaldo Palomares and Emery Cummins, Assessment of Rural Mexican-American Pupils, Preschool and Grades One Through Twelve, Wasco, California, (Sacramento, California: California State Department of Education, 1968), p. 25.

[4]Ibid.

[5]An Evaluation of the Special Educational Project for Migrant Children in Dade County Public Schools, Miami, Florida, (Naranja, Florida: Special Education Project for Migrant Children, 1966).

[6]Ibid., p. 40.

> required to compete in a different culture, or in an academic setting consisting of both resident and non-resident students, their normally adequate self becomes deflated. They are very cognizant of the fact that because of their sometimes abbreviated school exposure, they have fallen behind in their academic endeavors.[1]

Only one source was located that attempted to evaluate the results of an educational program's attempt to improve migrant children's self-concept. Using pre-post interviews with selected migrant children and parents as well as teachers' comments and reactions, Garofalo evaluated the New York State 1968 summer migrant program's realization of the goal: "improvement of the child's self-concept".[2] Prior to the program he asked forty-nine migrant students the below:

1. What kind of student are you?
2. How do you know?
3. What is your best subject?
4. How do you know?

At the conclusion of the summer's program he asked:

1. What have you learned in school?
2. How do you know?[3]

Based on replies to these questions, Garofalo stated:

> Data related to the first guideline, improvement of the child's self-concept, indicates that more students had definite opinions about what they could or could not do at the end of the program. Their reasons for knowing were still either not known or based only on teacher evaluations. This illustrates an improvement in terms of self esteem, but continues to be based on less mature sources of judgment.[4]

On the questions above, the authors of this report question the measure of self, let alone the allegation of "improvement in self esteem".

In addition, Garofalo reported:

> Parents had so little knowledge of the school program that most of them did not report changes in their children's self esteem.[5]

---

[1] Ibid., p. 42.

[2] James Garofalo, Evaluation of Migrant Summer School Programs Supported by the N.Y.S. Department of Education During 1968. Final Report, (Albany, N.Y.: N.Y.S. Education Department, 1968).

[3] Ibid., p. 12.

[4] Ibid., p. 20.

[5] Ibid.

In summary, in reviewing the research dealing with the self views of migrant children, these authors found very little pertinent to this undertaking. Not only was a lack of hard data evidenced, particularly related to the relationship between self image and school performance, but that which was located differed in theoretical base from the research reported here.

Brookover: Selected Research Findings and Conclusions

Wilbur Brookover and his associates have investigated the nature of self-concept of ability and its effects upon the school achievement of a class of urban students from grade seven through grade twelve (N = 463). Relevant to this undertaking are the conclusions of a longitudinal analysis of data from grades seven through ten:

> Self-concept of ability is a significant factor in achievement at all levels, 7th through 10th grades.
>
> The perceived evaluations of significant others are a major factor in self-concept of academic ability at each grade level, 8th through 10th.
>
> Change in stability in self-concept of ability is associated with change or stability in achievement. The associated change in achievement is noted, however, only over longer periods of time (three years).
>
> The relationship of self-concept to achievement is not associated with school attended.
>
> Socio-economic class has a low relationship to self-concept of ability and achievement. Furthermore, the relationship of SES to achievement decreases from grade seven through ten. Change analysis indicated no association between SES and self-concept or achievement.
>
> Self-concept is not merely a reflection of memory of past memories.
>
> There are no consistent sex differences in the relationships of self-concept with achievement.
>
> Self-concept of ability is not merely a reflection of memory of how teachers graded in the past, but memory of how teachers graded is more relevant than memory of past performance.
>
> Self-concept is not merely a reflection of past achievement.[1]

---

[1]Wilbur B. Brookover, et. al., op. cit., p. 51.

More central to this research are the results of the experiment used as a model for this project. Using a pre-post design with control, placebo, and experimental groups, the experiment investigated the effects of enhancing the academic expectations and evaluations which parents hold of their children's academic ability on under-achieving students' self-concept and academic achievement (N = 49 students). It was found:

> ...the sons and daughters of experimental group parents had (1) altered their perceptions of selves as achievers in a significantly positive direction; and (2) significantly improved their academic grades given by teachers (6/62-6/63). By contrast...there was no significant change in self-concept of ability for students in the placebo or control groups during the same period.[1] While the increase occurred over the experimental period, it is important to note that while the increase in self-concept was maintained into the following year, the increase in G.P.A. (grade point average) declined until it was no longer significantly greater than prior to treatment.[2]

Two additional treatments were studied as they attempted to enhance self-concept and academic achievement. One treatment utilized an "outside expert" while the other studied the effect of frequent contact with a counselor. Neither induced change in self-concept or academic achievement over the experimental period.[3] It was concluded:

> ...the self-concept of ability of low achieving students can be enhanced by working with parents and that this improvement in self-concept will be reflected in improved academic performance. The positive academic performance, on the other hand, does not maintain itself when such treatment is discontinued. Possibly continued treatment over longer periods will have a more lasting impact.[4]

In the latest and final report of the Brookover studies of self-concept of ability and school achievement, the below findings and conclusions relevant to this effort were reported:

1. ...parents are identified by nearly all students each year. (as significant others.)

2. the evaluations which students perceive parents, friends, and teachers hold for them are consistently correlated with self-concept of academic ability. The correlations range from .50 to .77 over the period of this study.

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[1] Ibid., p. 88.

[2] Ibid., pp. 85-86.

[3] Ibid., p. 204.

[4] Ibid., p. 100.

3. ...partial correlation analysis reveals that perceived parents' evaluation is more likely to affect self-concept than the evaluations of peers or teachers.

4. ...changes in perceived evaluations are significantly related to changes in self-concept of ability over one and two year periods.

5. ...the correlations between self-concept of ability and grade point average ranges from .48 to .63 over the six years.

6. ...although a significant proportion of students with high self-concepts of ability achieved at a relatively lower level, practically none of the students with lower self-concepts of ability achieved at a high level.

7. ...change in self-concept of ability over two-year periods is significantly related to parallel change in grade point average. Although changes over one year tend in the same direction, the relationship is not significant at the five per cent level of probability.[1]

8. ...control for either of these variables (I.Q. and socio-economic status) reduces the correlation between self-concept of ability and grade point average to only a limited extent. In contrast, however, the correlations between measured intelligence and grade point average and that between socio-economic status and grades are both greatly reduced by partialling out the effect of variation in self-concept of ability.

9. ...it was not feasible to make a definitive analysis to the impact of experimental treatments during the 11th and 12th grades. There is, however, no evidence of any significant delayed reaction to the experiments.[2]

---

[1] Brookover, Erickson and Joiner, op. cit., pp. 141-145.

[2] Ibid., pp. 144-146.

CHAPTER IV

PROCEDURES

Research Strategy

This project utilized a traditional pre-post experimental, control group design without, however, random assignment of subjects. Because the experiment dealt with subjects from a small minority group living within a restricted urban area, randomization seemed inadvisable because of the enhanced probability of contaminated treatment effects because of proximity, family ties or friendship. Instead, assignment to the two groups, experimental or control, was made to insure:

1. Relatives were not assigned to both groups.
2. Close friends were not assigned to both groups.
3. Neighbors were not assigned to both groups.

During the first and final weeks of a six week summer program, measures of SCA and academic achievement were obtained. In addition, it was originally intended to obtain pre and post measures of (1) the parent's perception of his child's ability and (2) the parent-child relationship. Because contamination of the pre measures occurred due to the examiners' explaining the test to the parents prior to pretesting, it was decided this analysis would not be meaningful and post measures were not collected.

Instrumentation

Self-Concept of Ability: Measures of self-concept of ability were obtained by administering a Spanish translation of the Michigan State General Self-Concept of Ability Scale originally developed by Brookover and his associates.[1] While no study of the translation was attempted, considerable study of the original scale has been undertaken.

Extensive reliability findings regarding the SCA Scale have been reported. Coefficients of reproducibility of .95 for males and .96 for females were computed for 1,050 seventh grade students.[2] Reliability coefficients calculated by Hoyt's Analysis of Variance were .82, .91, .92 and .86 for males and .77, .84, .84, and .84 for females in the seventh, eighth, ninth and tenth grades.[3]

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[1]Wilbur Brookover, Ann Patterson and Shailer Thomas, Self-Concept of Ability and School Achievement, Cooperative Research Project No. 845, U.S. Office of Ed., (East Lansing, Bureau of Education Research Services, College of Education, Michigan State University, 1962). The copyright for the scale is held by the Office of Research and Publications. Requests for permission to use it should be directed to Dr. Wilbur Brookover, Michigan State University, East Lansing, Michigan.

[2]Brookover, et. al., op. cit., p. 51.

[3]Ibid., p. 52.

Correlations of .75 for males and .77 for females were reported in one year test-retest study.[1]

A reliability index of .74 has been reported for the scale when used with 9-12 year old EMR students. On a similar group, a test-retest reliability study resulted in a coefficient of stability of .73.[3]

Validity studies of the SCA Scale have also been reported. To test for concurrent validity, correlations ranged from .54 to .73.[4] Evidence of validity was derived from correlations between the SCA Scale and perceived evaluation of others. Correlations varied from .60 to .84.[5] Predictive validity was determined by correlating the SCA Scale with grade point average. Correlations ranged from .69 to .72.[6]

Because many migrant children have reading problems, the difficulty level of the SCA Scale has been determined by reference to the Thorndike-Lorge work list.[7] In the SCA Scale all words except ten were at or below the third grade level. Of the ten words, seven were at the fourth grade level and the remaining three, "high-school", "advanced", and "unlikely", were at the sixth and seventh grade levels.

Careful administration of the scale was important. It was administered in individual or small group sessions by examiners able to communicate with the subjects in Spanish. If the subjects experienced difficulty reading, examiners were instructed to provide assistance and, if necessary, to read the scales orally while having the subjects answer vocally or by pointing.

Academic Achievement: Measures of academic achievement were obtained by administering the appropriate level of the reading and arithmetic subtests of the Metropolitan Achievement Test, Form A. The researchers are well aware of the many problems involved in administering standardized tests to migrant children. The Metropolitan was chosen because it was an available test that had been

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[1] Wilbur Brookover, Ann Patterson and Shailer Thomas, Self-Concept of Ability and School Achievement, Cooperative Research Project No. 845, U.S. Office of Education (East Lansing, Bureau of Education Research Services, College of Education, Michigan State University, 1962)

[2] Towne and Joiner, The Effect of Special Class Placement on the Self-Concept-of-Ability of the Educable Mentally Retarded Child, U.S. Grant No. 32-32-0410-6001, U.S. Office of Education (East Lansing, College of Education, Mich. State Univ., 1966), p.64

[3] Ibid

[4] Brookover, et al, op. cit., p. 55

[5] Ibid., p.56

[6] Ibid., p.57

[7] Edward L. Thorndike and Irving Lorge, The Teacher's Word Book of 30,000 Words (New York: Teachers College, Columbia University, 1944)

recommended in the Bibliography for Migrant Education Programs[1] and had been previously used by others in evaluating programs with migrants.[2]

Sample and Sampling Procedures

Students: Subjects for the study were drawn from students participating in the 1969 summer session of the Dunkirk Migrant Program. In the experimental group there were twelve children, all of Puerto Rican heritage, males and females ranging in age from six to sixteen ($\bar{X}$ CA = 11.2). They were divided among three families. The control group was composed of nine children, all of Puerto Rican heritage, males and females ranging in age from seven to fourteen ($\bar{X}$ CA = 10.9). They too were divided among three families.

Parents: While the subjects for this study were students, families were the unit for selection and placement, and experimenters worked directly with the parents, not the children. The experimental group was composed of three sets of Puerto Rican parents ranging in age from 39 to 63. In two families the fathers were steadily employed as farm laborers and intthe third family the father was employed when farm work was available. None of the mothers was employed steadily although two worked sporadically picking produce.

Subject mortality and absenteeism is a major concern in studies of this nature. Since we were dealing with an experimental group of only three families having eleven children in a treatment period of six weeks of school including but six parent meetings, having even one family move from the area would gravely impair the research effort. Similarly, any excessive parent absenteeism from the meetings would be hurtful.

Unfortunately one family did move during the final week of the experiment which meant the parents missed our final meeting (They had missed no other meetings.) but we were able to complete the post tests of their children. Both other families remained over the experimental period; with one exception both pairs of parents attended all six meetings--one father missed the initial meeting--and all their children successfully completed both pre and post tests. It is concluded that neither absenteeism nor mortality adversely affected findings.

Treatment

The treatment outlined below is basically that employed in the Bookover parent study modified whenever necessary to meet the needs and characteristics of the migrant parents.

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[1] Bibliography for Migrant Education Programs, (Washington, D.C.; Educational Systems Corporation, 1968), p. 57.

[2] Alton Harris, Summer Migrant Project, Unified School District Number 467, Wichita County, Leoti, Kansas, Evaluation Report.

General Arrangements: The group met in the evening for two hours once a week for six weeks. Meetings were held in a neighborhood Family Center, a local social agency familiar to the participants. Because they did not have private means of transportation members of the research team transported the parents to and from meetings.

To motivate parents and to repay them for any financial losses possibly incurred by attending meetings, for example, baby sitters or lost time at work, token financial awards were made for attendance. If one parent attended $2.00 was awarded while if both parents attended $5,00 was awarded. Experience proved that such payments should be handled with a good deal of sensitivity. Money should be placed in an envelope before being given to the parents. In addition it must be emphasized that payment was being made to ameliorate any expenses incurred by attendance, not to entice parents to help their children.

The group met around two large tables arranged in a modified V to facilitate TV taping. Participants were allowed to sit wherever they chose which meant that husbands and wives always sat next to each other. Consequently the two group leaders sat next to eabhoother.

All sessions were recorded by a portable TV camera which sat on a tripod several feet from the open V of the tables. Parents were informed that meetings were being taped. To make them more comfortable the parents were allowed to look at each other through the camera, to zoom in and out and to focus the picture. After the initial meeting the camera had no apparent aversive effect on the participants. They apparently forgot their initial anxiety and seemingly ignored its presence.

Group Leaders: To conduct each meeting two group leaders were utilized, neither of whom was designated chairman. One, however, assumed the major role in directing meetings. This was the female, a young, mid 20's, Costa Rican college graduate working in the local area as a Volunteer to America. The other leader was a young, early 20's, male who had lived in the community most of his life and was one of the few Puerto Ricans to graduate from the local high school. Both communicated fluently in Spanish and were well known and held in high esteem by the Spanish speaking community. During one meeting another young Spanish speaking Volunteer to Americantook part.

Procedures: All meetings roughly followed the same sequence. Just prior to the evening meetings the research staff would meet to review, discuss and perhaps modify that evening's plan. Then while one member left to pick up the parents, the others would ready the room, set up the TV equipment and start the coffee Upon arrival the parents would typically seat themselves at the table and converse informally. (They didn't live near each other and seldom met other than at the meetings.) To begin the meetings one of the group leaders would review the prior week's meeting and provide a time for the parents to introduce and discuss any related problems or happenings which occurred during the week. Discussion not directly concerned with our undertaking was discouraged. Then the evening's main concern was introduced. Generally group discussion was the primary vehicle for change although role playing, viewing TV reruns and other group participation activities were utilized (see following plans). After the meetings were adjourned and the parents taken home, the research group met to discuss the evening's events with particular concern for questions like: Did we do what we set out to do? Do they understand; are we communicating? What evidence is there that

they're doing what we talk about? Finally, the next week's plans were distributed, discussed and modified according to the prior meeting's progress.

It is important to note that while improving both the migrant child's self concept of academic ability and his academic achievement is the goal of this project, treatment did not involve contact with the subjects. The research team worked with parents only and the hypothesized changes in student behavior are assumed to occur by virtue of their interactions with parents, not with the researchers.[1] In addition it should be remembered that all subjects, experimental and control, attended the Dunkirk Summer Program over the treatment period where instruction in academic subjects, including arithmetic and reading, was a regular part of that program.

Meeting Plans: Following are the plans for each group session with the parents. In no instance were they followed exactly but should be read as the planned objectives and activities.

Also, the language used in them is not that used when talking to the parents. A crucial factor in the success of an undertaking of this sort is the success with which such plans are implemented in the idiom of participants. This was the group leaders' responsibility and their effectiveness cannot be judged here. For that, TV tapes of the meetings must be viewed.

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[1] In this regard, see limitations.

First Meeting

I. Preface (Givens within which we will operate)

A. Persons learn to behave in the ways that each considers appropriate to himself.

B. Persons learn what is appropriate by internalizing the expectations of significant others.

C. Functional limits of learning are determined by one's self image which is acquired in social interaction.

D. The individual learns what he believes significant others expect him to learn in the classroom and in other situations.

E. Therefore, for the migrant child (any child) to act intentionally to achieve, he must either see a task as appropriate behavior or perceive that significant others want him to achieve in the task.

II. Objectives

A. Parents should know each other and the members of the staff with whom they will be working.

B. Parents should be able to state:

1. the purpose of our meetings (See III C,1)
2. the approach to helping their children which we intend to discuss
3. arrangements for meetings: days, time, transportation, payment

C. We should have the results of the parental evaluation scale and the parent-child relationship questionnaire.

III. Method

A. Make introductions, coffee, seat at tables.

B. State that we are interested in helping their children at school but first need some information to help us plan.

1. Split the group and administer the scale and questionnaire. If communication problems are evident, do this individually.

C. State purpose (after regrouping around table):

1. Parents are important and have great influence on their children. We are going to help them help their children do better in school.

2. Children won't do well in school if:
   a. They don't think school and school work is a good thing.
   b. They don't think going to school and doing school work is something they should do
   c. They don't think they can be successful at school doing schoolwork
3. We will help them to influence their children to believe:
   a. Going to school and doing schoolwork is a good thing
   b. Going to school and doing schoolwork is something they should do
   c. They can be successful at school doing schoolwork

D. Examples of behaviors we want parents to do (Encourage participation here, reward instances where they have done these things by smiling, "good", "fine", etc.)

1. To define educational behaviors positively:
   a. Say good things about school
   b. To ask questions about school
   c. To look at schoolwork
   d. To display examples of schoolwork
   e. To participate in school activities with children (homework)
   f. To set aside time for school related activities
   g. To go to meetings with teachers and other school personnel
   h. To talk about school with children and others (positively or at least in a way depicting positive attitudes)
   i. To buy school materials for children
   j. To see the child gets to school
   k. To organize the child's life so that he can function effectively at school
      1. sleep schedule
      2. diet
      3. health
   l. To reward school performance
2. To define school related behaviors as appropriate for children:
   a. To tell child he should go to school
   b. To see the child goes to school
   c. When conflict occurs, to decide in favor of school
   d. To use models of successful participation in school
3. To define the child as capable of performing successfully at school:
   a. To reward all positive school performance
   b. To tell the child he is capable
   c. To ask questions about school performance
   d. To make favorable comparisons
   e. Ignore failings at school; never make negative statements
   f. Drain off negative feelings

E. Arrangements

1. Conclude by asking if they understand
2. Review arrangements
   a. Meet weekly at 7:00 - 9:00
   b. We will pick them up and take them home
   c. We can help them with expenses--babysitters, lost work, or other expenses--by giving them $2.00 for one parent, $5,00 for both parents.
   d. Hope both can come
3. For next week:
   a. Pay attention to what their children do in school
   b. Find out what their children think about school and how good they think they are at schoolwork.

Second Meeting

I. Objective

A. To state:

1. If my children are to achieve in school:
   a. They must believe they are able to do schoolwork
   b. They must think doing schoolwork is something they should do
2. If I tell my children they are able to do schoolwork, they will think they can.
3. If I reward doing schoolwork, my children will think they should do schoolwork.

B. To relate instances of telling and rewarding during the past week.
C. To state at least three ways of telling their children they are able to do schoolwork.
D. To state at least three ways of rewarding schoolwork.

II. Method

A. Group discussion

1. Group leaders review past meeting: Theory
2. Encourage exchange of week's events illustrating
   a. Tell children they are able
   b. Rewarding performance (Emph., do not punish for not doing, reward for doing)
3. If possible from discussion (recall) highlight different techniques. If not enough, solicit different ways or as a last resort give examples.
   a. Example: Telling able

      "You can do it"
      "You will be good at it"
      "I knew you could"
      "I think you can"
      "Don't believe them, you can"
      "I'm sure you can do it"
      "Keep at it, you'll learn"
      "You can learn"
      "You're smart"
      "You're smart enough to learn"

   b. Example: Rewarding

      Verbal: "That's good"
      "Fine"
      "Good job"
      "Great"
      "Magnificent"
      "Look how good you're getting"

Non-Verbal: Display schoolwork
Show it to visitors
Keep it--don't throw out
Give reward: Candy, gum, money
Permission to play or go somewhere:
"Because you're learning so well you can stay outside longer tonight"

"...you can visit..."
or
"...can come play with you"

4. Whatever rewards are appropriate
   a. Tie them directly to good school performance
   b. The idea that the children are able to do well at school

III. Evaluation

A. Ask parent to state in their own words

1. What they have been talking about
   a. What do?
   b. Why do?
   c. How to do?

IV. For next week

A. Ask them to continue doing what they have been doing:

1. Telling children they can do
2. Rewarding performance

B. To remember any troubles they have doing this because we will talk about problems next week.

Third Meeting

A. Objective: To highlight problem areas and provide ways of dealing with them consistent with the Brookover propositions. At the end of the session participants should be able to state at least two possible problems and for each state at least one approach to dealing with it.

B. Method: Group discussion

1. Review prior week's efforts re:
   a. Telling
   b. Rewarding
2. Solicit problems and work through ways of solving them (See guidelines)
   a. Make every effort for them to offer solutions without prior guidance. This should provide a check on their understanding of our previous meetings.

   If necessary offer problem situations and ways of handling. The two leaders may try some role playing.
3. Some possible problems:
   a. "The teacher says I can't."
   b. Tried but failed
   c. Doesn't try because they know they can't
   d. Can't do anything
   e. "Who cares anyway."
   f. "Everything I do is wrong."
   g. "Nobody else can, why should I?"
   h. "No matter what I do, the teacher says it isn't good enough."
   i. "Sam is better than I am."
   j. Is good at one thing but not at another
   k. Inconsistent

C. Evaluation: Pose problems and ask them to offer solutions. See B,3 for some possibilities.

D. For next week: Ask them to keep a record of what they did (Should we provide a checklist?) and pay attention to what their children say about themselves.

General Guidelines

1. Always be positive; do not punish.

2. Ignore negative behavior and poor performance.

3. Highlight all positive performance.

4. Avoid negative comparisons with others.

5. Avoid comparisons within the family.

6. When extra-family comparisons are made, they should always be in terms like:

   a. You're as good as ...
   b. You're as able as ...
   c. You're doing as well as ...

7. Self comparisons benefiting enhanced view of self should be encouraged. For example:

   a. See, you can do it.
   b. Remember when you said you couldn't; look, you did it.

8. Reward all positive statements about self; ignore all negative statements.

9. Never use "can't".

10. Externalize all causes for failure. For example:

    a. "You're just not ready yet".
    b. "Maybe you need more practice."
    c. "Ask for help, you'll learn it then."
    d. "It takes time; you'll get it."

Fourth Meeting

I. Introduction:

To this point project workers are satisfied that the parents know what we want them to do; at least during discussions they say what we want to hear. But there is some question that their actions equal their words. For example, it was stressed that if children are to learn that going to school is appropriate behavior, important behavior for them, parents must want them to go to school, to send them to school rather than to the fields to earn money. While all parents verbalize this and act on the belief, we know one family on one or two occasions sent their daughter to work rather than to school and it is strongly suspected that the same is true for an older son of another family. Moreover, when this eventuality was posed as a hypothetical situation, it was denied that it would ever happen in the families taking part in the project.

II. Objective:

This session's objective is to enhance the parents' awareness of their behavior toward their children at home--that what they say at our meetings is of little matter if they don't act at home according to what they say in the meetings. By the end of the meeting they will establish a goal for themselves:

A. The number of times per day that they will attempt to influence positive perceptions by their children.

B. That they will do this consistently, not be positive one minute, negative the next.

III. Method:

Have them guess how often each other tells one of their children that he is a good student, present findings on the board and discuss them.

A. On the top of the page of a small tablet, write the name of each parent, one parent per page. Prepare six booklets, one for each participant.

B. Distribute these explaining that we are going to have them guess how often each other tells their children they can do well at school. Give an example: How many times this week do you think Mr. X played the guitar? Write your guess on the tablet. etc.

C. Ask the following question: "How many times this week do you think (name a participant) told (name one of the participant's children) he is a good student?" Mark your answer in the booklet on the page where _____ name is. (Ask the participant to write the number of times he actually did tell the child he was a good student.) Repeat the questions for each participant.

D. Average the totals and enter them on the board in the below table:

Parent	Guess	Did
Mr. A		
Mrs. A		
Mr. B		
Mrs. B		
Mr. C		
Mrs. C		

E. Discuss the results, emphasizing the responsibility to act on the substance of our discussions, particularly:
   1. Don't know how much is enough, but the more positive statements are made the greater the probability for self enhancement
   2. Consistency: always positive
   3. Joint effort, both parents should be doing it
   4. It's difficult, okay, but keep at it

   Some possible discussion areas or initiators may be:
   1. Differences between families: how come?
   2. Differences between others' guesses (either more or less) and what actually was done: why?
   3. Differences between husband and wife: does one have more chances, is more interested, or what?

   Some possible questions you might use to get at E, 1-4:
   1. Of all the men (women) how come you thought Mr. (Mrs.) would do it the most? (the least?)
   2. Mrs. ?? how many times did you think your husband did it? (vice versa)
   3. Mr. ?? how come everybody thought you did more than you actually did?
   4. What made you think Mrs. ?? would do it more often than Mr. ?? (her husband) ? (or vice versa)

   BE POSITIVE! HIGHLIGHT THOSE WHO DO MORE AND HOW THEY MANAGE TO DO SO!

IV. Evaluation:

Have them keep a daily record of their behavior toward children. Provide them with a booklet for doing this, a simple thing having a page for each day so that they merely have to make a mark for each instance of positive statements.

V. Next Week:

A. Bring records,

B. Every now and then we will ask your children what you did when they brought work home.

C. Pay attention to your children when they make negative statements about themselves (I'm dumb. The teacher thinks I'm stupid.) How do they feel?

Fifth Meeting

I. Objective:

To teach parents to convey an understanding of how it feels to feel stupid.

At the end of the session parents, given a situation wherein their children express feelings of stupidity, respond, not argumentatively, but to the feeling expressed.

II. Method:

(See Haim Ginott, Between Parent and Child, N.Y., Macmillan Co., 1965, pp. 28-32.)

A. Discuss how it feels to feel stupid:

1. Afraid, anxious, insecure
2. Give self examples from school experiences "I was afraid I'd look stupid so I didn't say anything."
   "The teacher said I was dumb and I cried."

B. To help children feel better about themselves, when they say negative things about themselves, show them you understand the feeling. (See pp. 30-31, Ginott)

1. Respond to the feeling
2. Finally, say you have a more positive opinion

C. Role play (p. 31, Ginott)

1. Two leaders
2. Parents

Sixth Meeting

I. Objective:

To review the prior meetings
To plan for future groups

II. Procedure

Using a tape deck and monitor, play in sequence TV tapes of the previous meetings, stopping now and then to highlight and discuss important points.

A. Tape will be stopped when parents speak, not when leaders are speaking, and the statements reinforced. The idea is to respond to and reinforce parent statements in accord with the theoretical position of this project: The following should be highlighted:

1. For children to actively engage in efforts to be successful at school they must:
   a. Think such behavior is appropriate for them
   b. Think they can be successful
2. Children learn about themselves from others. Parents are the most important others from whom children learn about themselves.
3. In order for children to think going to school is appropriate and to believe they can be successful at school, their parents must act as though such were true.
4. While thinking school is appropriate behavior and believing that you are able to succeed at school are necessary to be a successful student, they do not insure success, other things like study skills, knowledge and effort are also needed.
5. Successful school behavior must be rewarded.
6. Parents must talk to their children about school.
7. Consistency in reward and recognition is vital.
8. While a limited number of rewards, positive statements and recognition will probably not result in an enhanced self image, over time a consistent pattern of positive statements by parents should enhance childrens' self image.
9. Do not argue with children about their negative views of self. Respond by indicating an understanding of negative feelings plus a simple statement of non-agreement.

B. Plans for future:

1. We will meet again to see how they're doing once school starts.
2. Figure out a way of contacting us if they move (a post card to Jim--give them one).

III. Evaluation:

A. We think parents are important--what they do at home will affect how well their children do at school. Now we've been together for six weeks, we would like to know what you think about what we've been doing. What do you think is good; what do you think is bad?

B. If you wanted to do much the same thing, what would you do?

IV. Closing:

A. Thank them for all of us.

B. Express our hope that the sessions have been helpful to them.

C. Assure them that we will contact them in the future.

Methods of Analysis

To test for significance in the two hypotheses under study, a one-tailed t-test for related measures will be utilized. This test is particularly appropriate when making tests of differences on individuals for whom two scores have been recorded.[1]

[1] James L. Bruning and B.L. Kintz, Computational Handbook of Statistics, (New York: Scott, Foresman and Company, 1968), pp. 12-15

Limitations

Several limitations are evident in the previously described procedures. In terms of subjects there is a small N drawn from a limited population. In addition to the statistical difficulties posed by small samples, differences may exist between families who sent their children to the summer program and other families who did not do so. Migrant families from Western New York may differ from migrant families in the Southwest, Florida or New Jersey, or the sample which comes from a Puerto Rican heritage may differ from migrants who are Black or who have a Mexican ancestry. Consequently, no claim is made that the sample is representative of migrants in general or even of Puerto Rican migrants in particular. To emphasize this: since the experimental group came from three families, only three pairs of parents were members of the group sessions. They were faithful in attendance, evidenced high interest and cooperated at every turn--so much so that, as time passed it was wished more reluctant or uncooperative parents attended in order to test the technique on more difficult ground. While many or most migrant parents may exhibit such qualities to generalize from this sample to an uninterested or uncooperative population would be grossly inappropriate.

That families were not randomly assigned to experimental and control groups, particularly with small N's, enhances the possibility of systematic differences between groups affecting treatment outcomes. Inspection of pre-experiment means revealed minimal differences between groups for SCA and academic achievement, the variables under study, which reduces concern for such contamination. Nevertheless, unstudied variables may differ systematically, not by chance as would be true if randomization were practiced.

Neither of the project directors is fluent in Spanish. As observers of every session we agree that if it weren't for the two excellent Spanish speaking group leaders who ran the sessions, the effectiveness of the model or of the techniques might never have been demonstrated. While the co-directors best knew the model and technique, the group leaders best knew the parents. Ideally one person would contain both qualities.

To control for the introduction of systematic bias in the summer school academic experiences of the migrant children under study, the parent groups were run completely separate from the school program. Nevertheless, student testing took place during school hours and in spite of efforts to control information, leaks may have occurred and some alteration of teacher behavior may have resulted. Two members of the research staff who also worked for the summer school saw no evidence of systematic bias in favor of either group, but the possibility must be recognized.

Because testing was conducted during the summer session, it was necessary to test around other activities and have make-up periods for absentees. Pre and post tests, then, were conducted during the first and last weeks of the program and so in fact do not encompass a six week treatment period. Such a restriction of the treatment period would act to inhibit hypothesized change.

CHAPTER V

Analysis of Data

Hypothesis 1: Systematically developed increases in perceived images and expectations which migrant parents (as significant others) hold of their low achieving children will result in significant increases in the students' self concept of ability (SCA).

$H_r : SCA_2 > SCA_1$

$H_o : SCA_2 \leq SCA_1$

where SCA_1 = pre experiment self concept of ability

SCA_2 = post experiment self concept of ability

Statistic: One-tailed t-Test for related measures α = .05

To test this hypothesis SCA pre-post scores were obtained for the experimental and control groups. Inspection of Table 1 reveals that but a 0.42 difference occurred between the experimental and control pre-treatment means.

TABLE 1: Means and Standard Deviations of SCA Scores with t Ratio and Level of Significance

Group	Pre $\bar{X}$	Pre SD	Post $\bar{X}$	Post SD	Ratio	df	Level of Significance
Experimental (N = 12)	28.42	5.14	31.58	4.55	1.81	11	.05
Control (N = 9)	28.00	5.8	27.89	4.4		8	N.S.

By inspection they do not differ significantly. Similarly, inspection revealed but a 0.11 difference between pre-post control group means and it was concluded for the control group no change in measured SCA occurred over the treatment period. But a 3.16 point increase is noted between the pre-post experimental group's SCA means which when tested proved to be beyond the .05 level of significance. Of concern in restricted samples is the possibility that considerable change by a small number of subjects accounts for the noted difference. In the experimental group seven subjects increased in SCA, two showed no change and three subjects decreased in measured SCA. These data support the conclusion that for these subjects systematically developed increases in perceived images and expectations which migrant parents hold of their low achieving children results in significant increases in the student's self concept of ability.

Hypothesis 2: Systematically developed increases in migrant students' self-concept of ability will result in significant increases in school achievement.

$H_r : AA_2 > AA_1$

$H_o : AA_2 \leq AA_1$

where AA_1 = pre-experiment academic achievement

AA_2 = post-experiment academic achievement

Statistic: One-tailed t-Test for related measures α = .05

To test this hypotheses reading and arithmetic scores were obtained for the experimental and control groups by administering form A of the Metropolitan Achievement Test before and after the treatment period. For each subject, raw scores were transformed to standard scores and then combined. Comparisons were made between the pre-post group means of the combined scores. In the experimental group eight subjects gained in combined reading and arithmetic scores, three subjects showed no change and no subjects showed a decline in achievement. In the control group four subjects increased in their combined scores, no subjects showed no change and four subjects declined in achievement. It is concluded that the observed changes are not the result of large differences attributed to a limited number of subjects.

In looking at TABLE 2 it will be noted that over the treatment period the experimental group experienced an average increase of 2.59 points (significantly different beyond the .05 level) while the control group experienced a 0.25 point gain (significantly different beyond the .90 level). The differences were of such

TABLE 2: Means and Standard Deviations of Combined Arithmetic and Reading Scores with t Ratios and Level of Significance

Group	Pre $\bar{X}$	Pre SD	Post $\bar{X}$	Post SD	t Ratio	df	Level of Significance
Experimental (N = 11)	26.68	6.79	29.27	6.86	1.876	10	.05
Control (N = 8)	27.31	6.86	27.56	5.96	.45	7	N.S.>.90

a magnitude that for these data it is concluded that systematically developed increases in migrant students' self concept of ability resulted in significant increases (at α = .05) in school achievement.

Discussion of Findings

Analysis of the two hypotheses under study has provided evidence that working with migrant parents using Brookover's model and the techniques described previously will result in their children viewing themselves more positively as students and performing at higher levels academically. Moreover, the increases can be noted over a brief six week period. Some cautions, however, should be noted: first, regarding enhanced self definition as student.

Self-Concept:

While it is relatively straight forward to describe what we did or attempted to do in the parent group meetings, what the parents actually did away from our meetings is not known. What did they do with our suggestions at home? Did they try everything we asked them to try or only part of it and how did they do it? How much did they do and who did it? True, within the limitations of this effort the Brookover model and its theoretical superstructure have been supported, and it is reasonable to recommend the techniques used to operationalize the approach for modifying the self behaviors of migrant children. But no statement can be made about the specific behaviors of particular parents or of the parents as a group. How they practiced the content of group meetings is not known. Equally important, no claim is made for long range gain. While it is gratifying to effect change in self behavior over a short period, six weeks, of greater concern is the extent to which noted gains are maintained. This research does not investigate that question. A start has been made; it is possible to claim evidence exists that the academic self statements of migrant children can be enhanced, but only further study will shed light on the extent to which gains are maintained or under what conditions they are maintained.

A further question of interest lies in the dimension of change noted in the scale responses. Factor analytic studies of the Brookover scale have revealed that two clusters can be noted. One has been labeled a present comparison oriented cluster and the other a future oriented cluster.[1] Did the noted increase in self statements occur by reason of change in items having a present referent or in items having a future referent?

Finally, since the efficacy of effecting change in migrant children's self statements by working with parents as significant others was not tested against other possible ways of effecting such improvement, for example, by using school counselors or altering teacher behavior, no claim can be made for the efficiency of the studied approach. Moreover, it has been noted that this research is exploratory, not definitive and operates within restricting limitations. Nevertheless, evidence exists in support of the method under study and while caution is warranted, the technique is deserving not only of further study but also of serious consideration by those who desire to enhance the migrant child's self-concept of academic ability.

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[1] See Ann Paterson, "Reliability and Validity of Self-Concept of Ability Scale," in Brookover, Erickson, and Joiner, op. cit., pp. 155-172 and Kenton T. Schurr, et al, The Effect of Special Class Placement on the Ability of the Educable Mentally Retarded Child: Part II, Report of U.S. Office of Education Grant 3-7-700052-3099, (East Lansing, Michigan: College of Education, Michigan State University, 1967) pp. 107-116

Academic Achievement:

While the researchers were working with the experimental group's parents, both the experimental and control group students attended a six-week summer program for migrant children. As part of that program, both groups received instruction in reading and arithmetic. They attended the same classes, had the same teachers and, as far as the researchers have been able to determine, received no systematically different instruction, treatment or experiences. At the end of the program, however, a significant gain was noted in the academic performance of the experimental group while no increase was obtained for the control group. Can the treatment experienced by the experimental group's parents be said to cause the noted difference in academic performance?

Within the Brookover model, academic achievement is thought to result from a complexity of antecedents. Self-concept of ability, one of the antecedents, is formalized as a "threshold concept". It is necessary but not a sufficient condition for given levels of academic performance which limits the "learnings attempted" but within the established limits does not account for variations in performance.[1]

In applying the model to the previously noted results, it can be said that all the migrant students began the summer program with an SCA imposed functional limit on the learnings they were willing to attempt. Work with the experimental group's parents resulted in enhanced SCA's for their children which expanded the functional limits on the experimental group's learning. Because no increase in SCA was noted for the control group, no expansion of the functional limit to their learning would take place. As the two groups experienced the migrant summer school program, the children in the experimental group by virtue of their higher SCA's were able to attempt more difficult levels of learning and as a result achieved at a significantly higher level than did the control group. If no academic learning had been undertaken, it does not follow that the experimental group would demonstrate the higher level of achievement; in the presence of appropriate learning experiences, however, their higher SCA level enabled higher levels of academic achievement to result. Although the experimental group's higher SCA level did not singlehandedly cause their higher level of academic performance, it made it possible for other appropriate experiences or conditions (like the migrant summer program) to result in better academic performance.

While beyond the scope of this analysis it should be noted that change in academic performance was not consistent between arithmetic and reading. In arithmetic the mean of both groups increased approximately four points, the experimental group's mean from 27.75 to 31.58 and the control group's mean from 26.63 to 30.88. In reading, however, the experimental group's mean increased slightly from 25.09 to 25.73 while the control group lost about four points, from a mean of 28.00 to a mean of 24.25. The difference in the combined scores then largely results from the control group's drop in reading and is not a product of parallel changes over both subject matter areas. What caused the variance is not known. Within the theoretical structure of this research, variation could be accounted for by differences operating within the limitations imposed by SCA. Perhaps reading was poorly taught or not emphasized while arithmetic skills were a curricular emphasis and skillfully taught. Supposing this were true and remembering the threshold nature of SCA, it could be argued that both groups' SCA levels were significantly high for achievement under conditions of excellence or emphasis but the higher level of the experimental group was necessary to maintain parity under less optimal conditions or emphasis. The point is speculative, however, and beyond the conditions of the present analysis.

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[1]Brookover, Erickson and Joiner, op. cit., p. 12.

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary

The research reported herein concerns itself with improving the migrant child's academic achievements by investigating the general research problem:

> Will an attempt to modify migrant parents' behavior in accordance with social psychological principles result in better academic achievement by their children?

Within the general problem, the particular research problems investigated are:

1. Can the images and expectations which migrant parents hold for their low achieving students be positively modified?

2. Will systematically increased images and expectations as perceived by migrant children result in enhanced self-concepts of ability?

3. Will enhanced self-concepts of ability result in significant increases in academic achievement?

To study these problems the below hypotheses were investigated:

> Hypothesis I:
> Systematically developed increases in perceived images and expectations which migrant parents (as significant others) hold of their low achieving children will result in significant increases in these students' self-concept of ability (SCA).

> Hypothesis II:
> Systematically developed increases in migrant students' self-concept of ability will result in significant increases in school achievement.

The project utilized a traditional pre-post experimental control group design without, however, random assignment of subjects. Subjects were participants in a migrant summer school program. All of Puerto Rican descent, there were twelve members in the experimental group and nine in the control group. Data were collected by administering the reading and arithmetic subtests of the Metropolitan Achievement Test, Form A and a Spanish translation of the Michigan State General Self-Concept of Ability Scale. To analyze the date a one-tailed t-test for related measures was used.

Tests of the two hypotheses resulted in the following findings:

> Hypothesis I: At $\alpha = .05$, while the control group's SCA scores demonstrated no significant change over the treatment period, the SCA scores of the experimental group increased significantly.

Hypothesis II: At α = .05, while the control group's academic achievement demonstrated no significant change over the treatment period, the experimental group's academic achievement increased significantly.

Conclusions

Based on the previously stated findings, it is concluded:

1. For these subjects systematically developed increases in perceived images and expectations which migrant parents hold of their low achieving children result in significant increases in students' self-concept of ability.

2. For these subjects systematically developed increases in migrant students' self-concept of ability result in significant increases in school achievement.

Implications

It has been demonstrated that migrant children's academic achievement can be improved by enhancing their self concept of ability through systematic upgrading of the images and expectations which parents hold toward their children as students. But as is true of most initial research, more questions than answers have resulted.

First, can the results of this research be generalized to other migrant populations, for example, with migrants in the Southwest, Blacks or even others of Puerto Rican descent? While no theoretical reasons provide a basis for thinking the Brookover model has limited application, until larger studies are undertaken with more diverse populations, generalizations must be limited. Fortunately the instrumentation utilized and detailed description of the parent treatment makes replication feasible. For those desiring a more complete picture of the parent sessions, TV tapes of the sessions are available.

Similarly, can the methods studied here be equally as effective with other parent groups? While the Brookover model may prove of value over various migrant populations, the techniques used here for influencing parent behaviors may not be effective. With some, group techniques may not be appropriate: for example, one to one explanations, live in models, or reward systems might best lead to the desired changes. Also while working with parents as significant others has proved effective, for some migrant children effecting change in self definition might better be accomplished by other means. Working directly with the children or through teachers and peers might be more appropriate and equally effective. Until such comparisons are made, however, empirically based statements about the relative merits of various techniques cannot be made.

Allied to concern for utilizing appropriate techniques to influence the sources of migrant children self definitions is the question of efficiency. Of the behaviors recommended to the parents, which did they use and which proved most influential for effecting positive change in their children's self statements? Formulating the most efficient means may be vitally important in migrant groups where often only limited time is available for instituting change.

Is the noted improvement in academic achievement maintained? Small value can accrue from temporary improvement when long range betterment is the fundamental goal of efforts in the migrants' behalf. If refining studies and replication with other populations prove successful and if gains can be maintained, then a valuable addition will have been made toward improving the migrant child's life chances. The results reported are promising; they demand much for fulfillment.

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APPENDIX A

INSTRUMENTS: General Self-Concept of Ability Scale

General Self-Concept of Ability Scale: Spanish Translation

Michigan State General Self-Concept of Ability Scale

How do you rate yourself in school ability compared with your close friends?

The best
Above average
Average
Below average
Poorest

How do you rate yourself in school ability compared with those in your class at school?

The best
Above average
Average
Below average
Poorest

How do you think you would rank in your high school graduating class?

The best
Above average
Average
Below average
Poorest

Do you think you have the ability to complete college?

Yes, definitely
Yes, probably
Not sure either way
Probably not
No

Where do you think you would rank in your class in college?

The best
Above average
Average
Below average
Poorest

In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?

Very likely
Somewhat likely
Not sure either way
Unlikely
Most unlikely

Forget for a moment how others grade your work. In your own opinion how good do you think your work is?

Excellent
Good
Average
Below average
Much below average

What kind of grades do you think you are capable of getting?

Mostly A's
Mostly B's
Mostly C's
Mostly D's
Mostly F's

Requests for permission to use this scale should be directed to Dr. Wilbur Brookover, Michigan State University, East Lansing, Michigan.

Michigan State General Self-Concept of Ability Scale
(Spanish Translation)

Como compara Usted su habilidad escolar en relacion a la de sus amigos mas cercanos?

Soy el mejor
Estoy por encima del promedio
Estoy en termino medio
Estoy por debajo del promedio
Estoy entre los pobres

Como compara Usted su abilidad escolar en relacion a la de sus companeros de clase?

Soy el mejor
Estoy por encima del promedio
Estoy en termino medio
Estoy por debajo del promedio
Estoy entre los pobres

Que puesto cree Usted que obtendria en el orden de meritos de su clase?

El mejor
Por encima del promedio
Termino medio
Debajo de promedio
Entre los peores

Cree Usted que tienes la habilidad para poder completar la Universidad?

Si, definitivamente
Si, probablemente
No estoy seguro si uno u otro
Probablemente no
No

Que puesto cree Usted que obtendria en el orden de meritos de su clase? estando en la Universidad?

El mejor
Por encima del promedio
Termino medio
Debajo de promedio
Entre los peores

Para llegar a ser un Doctor, Abogado o Profesor Universitario, hay que seguir estudiando despues de terminar los cuatro anos de Universidad. Que probabilidades hay de que Usted haga estos estudios avanzados?

Seguramente
Probablemente
No estoy seguro
Muy poco probable
Remotamente probable

Olvidese por el momento como la consideran a Usted otras personas con respecto a su trabajo. En su opinion, como considera Usted que es su trabajo?

Es excelente
Es bueno
Es termino medio
Es por debajo del promedio
Esta muy por debajo del promedio

Que clase de notas cree Usted que es capaz de obtener?

Principalmente A
Principalmente B
Principalmente C
Principalmente D
Principalmente F

APPENDIX B

Supplementary Data:

- Significant Others
- Academic Significant Others
- Academic Aspirations
- Academic Expectations

While conducting the experiment we collected a limited amount of additional data relevant to the position under study. The instruments were devised and originally used by Wilbur Brookover and his associates. Although no analysis of these data were undertaken, they are presented here since they may hold some interest for those reading the report.

Significant Others

The Concept:

The concept of "significant other" is derived from the work of Harry Stack Sullivan[1] and is important to study as the sources of self definitions.

Instruments:

The English original used to operationalize the significant other concept follows:

SIGNIFICANT OTHERS

There are many people who are important in our lives. Who are the people who you feel are important in YOUR life? Please tell who each person is.

NAMES	WHO IS THIS PERSON?

The Spanish translation is:

Hay muchas gentes que son importantes en nuestras vidas. Quienes son las personas que Usted siente son importantes en su vida?

NOMBRE	QUIEN ES ESTA PERSONA?

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[1] Harry Stack Sullivan, Conceptions of Modern Psychiatry: The First William Alanson White Memorial Lectures, (Washington, D.C.: The William Alanson White Psychiatric Foundation, 1947), pp. 18-22

Data:

Responses to this question appear below in Table A.1.

TABLE A.1.: Total Number and Percentage of Subjects Who Named Individuals in Various Categories of Others as Being Important in Their Lives.

Categories	Experimental				Control			
	Pre		Post		Pre		Post	
	N	%	N	%	N	%	N	%
Parents	12	100	12	100	7	78	9	100
(Mother)	(12)	(100)	(12)	(100)	(7)	(78)	(9)	(100)
(father)	(11)	(92)	(12)	(100)	(5)	(56)	(5)	(56)
Age Level Relative	6	50	2	17	1	11	1	11
Adult Relative	2	17	0	0	0	0	1	11
Friend, Same Sex	2	17	0	0	0	0	0	0
Friend, Opp. Sex	2	17	2	17	0	0	0	0
Local Adults	0	0	0	0	0	0	0	0
Teacher	1	8	0	0	0	0	0	0
Other Academic Persons (Princ, aids etc.)	0	0	0	0	0	0	0	0
Unclassified	1	8	0	0	0	0	0	0

Academic Significant Others

The Concept:

The academic significant other question attempts to particularize Sullivan's "significant others" by posing a framework within which to answer, in this case the school. Thus the antecedents are sought for definition of self as a student.

Instrument:

The English original used to operationalize "academic significant other" follows:

ACADEMIC SIGNIFICANT OTHERS

There are many people who are concerned about how well young people do in school. Who are the people you feel are concerned about how well you do in school?

NAMES WHO IS THIS PERSON?

The Spanish translation is:

Hay muchas personas que se preocupan de como los jovenes trabajan y responden en la escuela. Quienes son las personas que Usted cree que se estan preocupando de como le va a Usted en la escuela? Po· favor enumero:

NOMBRE QUIEN ES ESTA PERSONA?

Data:

Responses to this question appear below in Table A.2.

TABLE A.2: Total Number and Percentages of Subjects Who Named Various Categories of Others as Being Concerned About How Well They Did in School.

Categories	Experimental				Control			
	Pre		Post		Pre		Post	
	N	%	N	%	N	%	N	%
Parents	1	8	4	33	2	22	2	22
(Mother)	(1)	(8)	(4)	(33)	(2)	(22)	(2)	(22)
(father)	(1)	(8)	(4)	(33)	(1)	(11)	(1)	(11)
Age Level Relative	1	8	0	0	0	0	0	0
Adult Rel.	0	0	0	0	0	0	0	0
Friend, Same Sex	0	0	0	0	1	11	1	11
Friend, Opp. Sex	0	0	0	0	0	0	0	0
Local Adults	1	8	0	0	0	0	0	0
Teachers	12	100	8	67	8	89	7	78
Other Academic Persons (Princ., aids, etc.)	3	25	1	8	1	11	1	11
Unclassified	0	0	0	0	0	0	0	0

Academic Aspirations

The Concept:

Academic aspiration refers to the educational level an individual wishes to attain.

Instrument:

The original English version appears below:

If you were free to go as far as you wanted to go in school, how far would you like to go?

a. Quit right now.
b. Go to high school for a while.
c. Graduate from high school.
d. Go to secretarial or trade school.
e. Go to college for a while.
f. Graduate from college.
g. Do graduate work beyond college.

The Spanish translation is:

Si Usted tuviera la libertad de proseguir sus estudios libremente, hasta que grado seguiria?

a. Me gustaria retirarme ahora mismo.
b. Me gustaria seguir en la escuela por un tiempo.
c. Me gustaria graduarme de la escuela secundaria.
d. Me gustaria ir a alguna escuela de secretariado o a una escuela technica.
e. Me gustaria ir a la Universidad por algun tiempo.
f. Me gustaria graduarme de la Universidad.
g. Me gustaria seguir estudiando despues de graduarma de la Universidad.

Data:

A summary of the data appears below in Table A.3.

TABLE A.3: Academic Aspiration Means

	Pre X	Post X	D
Experimental	4.9	5.1	+.2
Control	3.6	3.4	-.2

Academic Expectations:

The Concept:

The education level an individual thinks he will actually attain is his academic expectation level.

Instrument:

The original English version appears below:

Sometimes what we would like to do isn't the same as what we expect to do. How far in school do you expect you really will go?

a. I think I really will quit school as soon as I can.
b. I think I really will continue in high school for a while.
c. I think I really will graduate from high school.
d. I think I really will go to secretarial or trade school.
e. I think I really will go to college for a while.
f. I think I really will graduate from college.
g. I think I really will do graduate work beyond college.

The Spanish translation is:

Algunas veces, lo que a nosotros nos gustaria hacer, no es lo mismo que lo que esperamos hacer (nuestras expectativas). Que grado de Educacion cree Usted que realmente piensa obtener?

a. Creo que realmente voy a retirarme de la Escuela tan pronto como pueda.
b. Creo que realmente voy a continuar en la Escuela por un tiempo.
c. Creo que realmente me voy a graduar de la Escuela Secundaria.
d. Creo que realmente voy a ir a una Escuela de secretariado o comercio o Artes y Oficios.
e. Creo que realmente voy a ir a una Universidad por algun tiempo.
f. Creo que realmente me voy a graduar de una Universidad.
g. Creo que realmente voy a seguir estudiando despues do graduarme de la Universidad.

Data:

A summary of the data appears below in Table A.4.

TABLE A.4: Academic Expectation Means

	Pre X	Post X	D
Experimental	4.6	4.5	-.1
Control	3.2	4.1	+.9